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PHOENIX

ELECTRO-VOICE MANIFOLD
CE MANIFOLD TECHNOLOGY

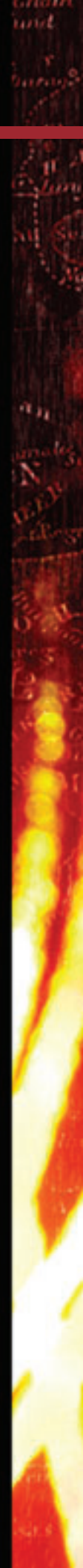




REVITALIZATION
REACTIVATION RENAISSANCE **REVIVAL**
RENEWAL RESURGENCE REGENERATION
REJUVENATION **REBIRTH**

PHOENIX

ELECTRO-VOICE MANIFOLD TECHNOLOGY
REGENERATION RENAISSANCE
REGENERATION RESURGENCE REACT **REVIVAL**
REJUVENATION RENEWAL
REGENERATION REACTIVATION







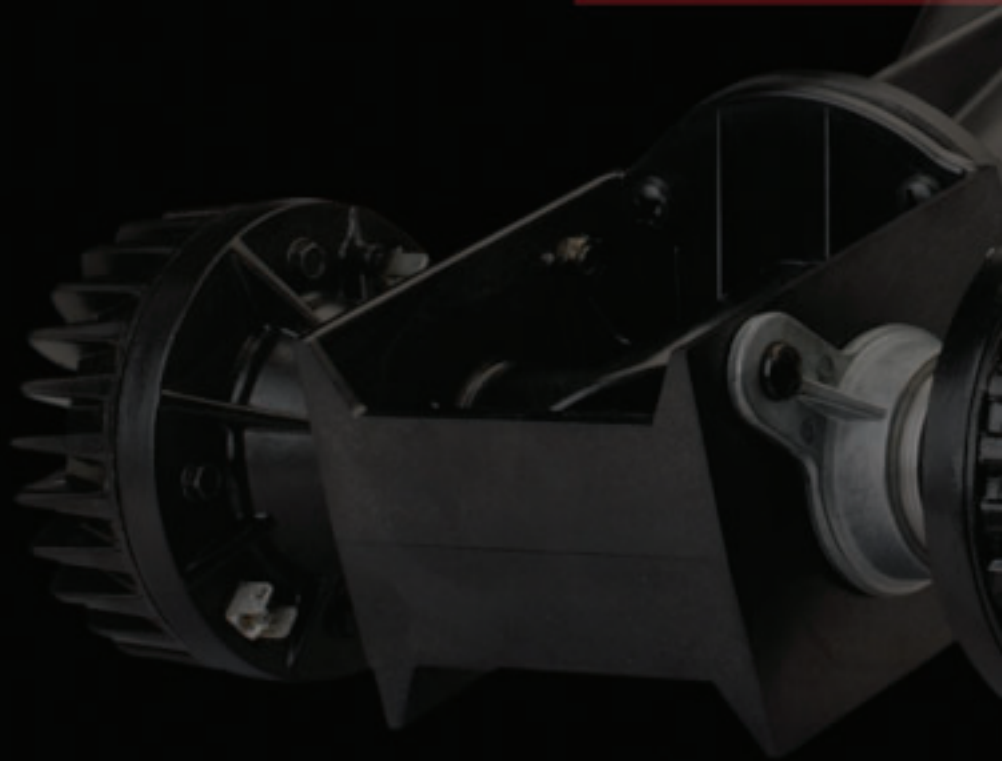
Phoenix is the rebirth of patented Electro-Voice Manifold Technology.

In 1985 EV introduced the MT series to address the needs of concert sound professionals looking for high SPL capabilities, reduced distortion and constant coverage using smaller enclosures. MT series achieved these goals by utilizing revolutionary Manifold Technology that employed multiple drivers on a single horn. Not long after its introduction, major sound companies deployed large MT series systems for the world's top tours, ushering in a new paradigm in sound reinforcement. Unique products included the quad 18-inch MTL-4 subwoofer and the MTH-4 with four 10-inch woofers, four 2-inch compression drivers and four 1.25-inch compression drivers, all in a single enclosure. MT series was quickly embraced as the worldwide standard.

As line arrays came into vogue and manufacturers put more resources into their design, the market for loud, ground stacked systems with flying capabilities was neglected. As a customer-driven company offering complete application-specific solutions, EV recognized the need to fill the void created by line array. Phoenix, with second generation Manifold Technology and all-new DVX woofer design, specifically addresses the needs of customers in this market. From regional PA companies to high-end concert touring, Phoenix provides medium and long-throw solutions for applications including festivals, clubs and outdoor events—anywhere high SPL non-line array systems are required.

Electro-Voice® Manifold Technology

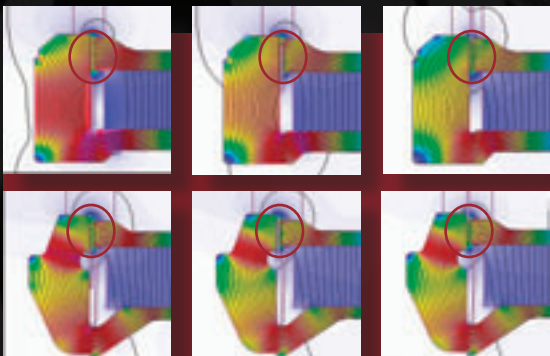
Unique to all Phoenix high-mid systems and monitors is patented Electro-Voice Manifold Technology. Borrowing from the innovations of the original MT series, yet employing the most advanced Electro-Voice technology, Phoenix manifolds boast major advantages over single compression driver designs. More drivers means higher power handling capacity and more SPL per horn, allowing the use of less overall cabinets for the same output. Dual drivers offer the benefit of tremendous headroom in the mid and high frequencies letting you confidently push that vocal up and over the top of a dense mix or high stage volumes. Additionally, dual drivers don't have to work as hard as a single driver which results in less heat build up in each driver and provides reliable roadworthy longevity. In the rare event one driver fails, the integral redundancy of a dual driver system offers peace of mind that the show will go on.



ELECTRO-VOICE MANIFOLD TECHNOLOGY

ND2





Snapshots of Dynamic FEA for a high

power signal (100V) for a conventional design (top) versus DVX (bottom). The changing colors in the gap indicate an extreme variation of the magnetic flux for the conventional design, while there is only slight variation with DVX. The result is a more even travel of the DVX voice coil, significantly reducing harmonic distortion.

DVX

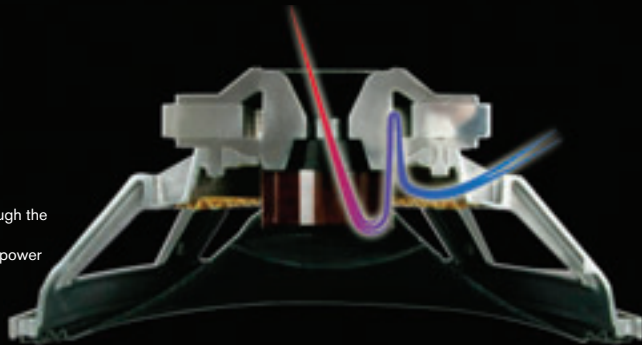
Electro-Voice® DVX® Transducer Technology

EV is known globally as a pioneer and leader in transducer designs for professional loudspeaker systems. The result of an ongoing multi-million dollar R&D project, EV's groundbreaking DVX woofer series sets a new benchmark for performance, high SPL output and low distortion. DVX motor structure and suspension is optimized for very linear movement using state-of-the-art development tools, such as computer simulation software for dynamic finite element analysis (Dynamic FEA). In conventional woofer designs, high power signals with peaks up to and beyond 100V create a wide variation in the magnetic field, disturbing the linear movement of the voice coil and resulting in audible distortion. Unique DVX motor geometry greatly reduces these changes in magnetic flux, reducing harmonic distortion up to 20dB.

DVX frames are designed with integrated Forced Air Voice Coil Cooling™. The movement of cone and voice coil forces air inside the woofer, taking heat away from the voice coil and exhausting it thorough the pole plate. This results in drastically cooler operation and reduced power compression, so DVX can provide continuously higher output. The asymmetric suspension of DVX provides a perfectly harmonic system that eliminates typical loudspeaker resonances that can cause audible sound coloration. This process of Ring-Mode Decoupling (RMD) reaches back to the late 90's and is already integrated in DVX. Computer modeled die cast frames are optimized to be rugged and light-weight, while specially cold forged magnets provide higher sensitivity and additional weight savings.

Offering an unprecedented level of sonic clarity, dynamic capability, very high output and long-term endurance and reliability, the amazing performance of DVX woofers needs to be heard to be believed. Combined with the output potential of manifold technology, DVX is the base for the outstanding acoustical performance of Phoenix.

With every excursion, cool air is drawn through the voice coil, removing heat. This significantly reduces power compression, resulting in higher long-term SPL.



PX2122

Intended for situations where very high SPL

and maximum throw are desired, the PX2122 packs tremendous horsepower. Dual ND2 compression drivers are precisely summed in a manifold configuration for increased power handling, maximum high and mid frequency headroom, and lower distortion. Designed to reproduce the frequency range above 80 Hz, the PX2122 works perfectly with the PX2181 subwoofer.

The tight coverage of the low distortion 45° x 30° rotate-able horn gives the PX2122 excellent array characteristics. An integral 15° per side trapezoidal design allows arraying up to three wide, with a recommended minimum of two per side. In an effort to simplify setup, PX2122 cabinets can be securely splayed within the safety grooves routed into the PX2181 subwoofer, reducing the need for straps and eliminating speaker cluster guesswork.

Dual high-efficiency, forced-air cooled DVX3121 12-inch woofers compliment the high performance manifold section of the PX2122. With an overall broadband sensitivity of 102dB and "bi-amp only" architecture, the PX2122 is ready to be utilized to its maximum high power potential.

The PX2122 employs rugged EVCOAT® covering and 18-mm, 13-ply plywood with complex tongue-in-groove construction for long-term strength and consistency. Handles on the top, bottom and both sides make transport easy, while eight M10 points provide flexibility in situations where hanging is either necessary or optimal.

accessory:

Optional PX-D1 wheel kit for PX2122 and PX2152 rotates to a horizontal position for rolling and a vertical position when forming arrays, eliminating the need to remove and store the PX-D1 during use.







PX2152

Whether combined with the PX2181 subwoofer

or used as a standalone system, the PX2152 shines in medium throw applications that require the low-frequency reproduction of 15-inch woofers. Accurately summed dual ND2 compression drivers in a manifold configuration allow for increased power handling, mid and high-frequency headroom, and low distortion. Selectable bi-amp or passive operation makes the PX2152 work extremely well in conjunction with Phoenix subwoofers or as a single box system for live and club sound.

The wider 60° x 45° coverage pattern of the low distortion rotate-able horn gives the PX2152 added flexibility in system design. With an integral 15° per side trapezoidal angle, two PX2152 can be arrayed for a larger system; simply use one cabinet for a smaller system. In an effort to simplify setup, PX2152 cabinets can be securely splayed within the safety grooves routed into the PX2181 subwoofer, reducing the need for straps and eliminating speaker cluster guesswork.

Dual high-efficiency, forced-air cooled DVX3150 15-inch woofers compliment the high performance manifold section of the PX2152. With an overall broadband sensitivity of 99dB and the ability to run full range passive or bi-amp, the PX2152 is an outstanding solution for a wide variety of applications.

The PX2152 employs rugged EVCOAT® covering and 18-mm, 13-ply plywood with complex tongue and groove construction for long-term strength and consistency. Handles on the top, bottom and both sides make transport easy, while eight M10 points provide flexibility in situations where hanging is either necessary or optimal.

accessories:

Optional durable covers for Phoenix systems resist the normal wear and tear of the road. Shown from left - PXC-Sub,

PXC-Top, PXC-15M and PXC-12M.



PX2181

The PX2181 is a high-efficiency horn-loaded

dual 18-inch subwoofer intended for high-output low-frequency sound reinforcement. With the ability to perform in either portable or fixed installation applications, the flexibility of the PX2181 makes it usable within a Phoenix system, a club installation, or as an add-on to much larger concert touring systems.

Designed to be placed in vertical and horizontal orientations, alignment cups are placed in the PX2181 enclosure to secure multiple subwoofers in an array. Up to three Phoenix top boxes can be safely placed within the unique grooves routed into two sides of the PX2181 in the horizontal position, while routed foot receptacles securely maintain a single Phoenix top box in the vertical position.

A switch allows the user to toggle between parallel mode (in which both woofers can be addressed by one amplifier channel) and dual mode (where each woofer can be addressed independently). In dual mode, three PX2181 subwoofers can be connected to two amplifier channels for maximum flexibility and output.

The PX2181 utilizes dual DVX3180 18-inch woofers, a high-efficiency design with forced-air cooling. When coupled to the dual low-frequency horns, the system achieves an amazing 105dB sensitivity, allowing for performance that is equally at home in a Phoenix system or a much larger touring rig. The enclosure is constructed from 18-mm, 13-ply plywood, utilizing tongue and groove joints and EVCOAT® for long-term durability.

accessory:

Optional PX-D2 wheel kit for PX2181 makes transport simple and effective.







ELECTRO-VOICE MANIFOLD TECHNOLOGY

PX1122M

PX1152M

The PX1122M and PX1152M are versatile,

full-range, two-way multi-purpose loudspeakers designed for a wide array of applications.

Capable of being used in either bi-amp or passive mode, these powerful systems are outstanding floor monitors, side fills, small system mains and truss mounted fills.

Both systems utilize precisely summed dual manifold ND2 compression drivers (for maximum mid and high-frequency horsepower) coupled to a low distortion 90° x 45° horn for optimal coverage. High-efficiency forced-air cooled DVX woofers provide the punch and bottom end for these powerful yet diminutive systems.

For stage monitor applications, the PX1122M and PX1152M feature symmetrical left and right 60° monitor angles; NL4 connectors on both sides of the cabinet make daisy-chaining multiple speakers simple. An integrated threaded rigging point allows for truss-mount installation using the VSA-1 strong-arm accessory.

Both enclosures are constructed of 18-mm, 13-ply plywood using tongue and groove joints and EVCOAT for long-term reliability.

accessories:

The optional VSA-1 strong arm adjusts to fit both PX1122M and PX1152M. Shown on left with optional TCA-1 truss clamp.



Phoenix System Drive

Phoenix has been designed and engineered as a complete system, tested and tuned with Electro-Voice power amplifiers and digital signal processors. While all Phoenix models are singularly exceptional, maximum potential is truly realized with a combination of Phoenix tops and subs driven by world-class EV electronics. Whether it is an outdoor festival, small live venue, or cavernous nightclub, it is the system approach that gives Phoenix users tremendous flexibility to scale their system to the demands of their jobs.

Electro-Voice has more than 50 years of expertise in the design and manufacture of high performance professional power amplifiers. EV power amplifiers have become common in top concert sound applications worldwide due to their sonic purity and extreme reliability. CP4000S is the flagship of the Precision Series™ Compact line and perfect companion to all Phoenix loudspeakers. It delivers stable maximum output power of 2 x 2100 watts into 2 ohms, 2 x 1500 into 4 ohms, in an extremely lightweight 8.7 kg (19 lbs), 2RU package.

The Electro-Voice DX-38 sets standards for digital loudspeaker controllers and processors, boasting an incredible dynamic range of 115 dB and a proven track record of sonic excellence and reliability. The power and flexibility of the DX-38 is enhanced by Electro-Voice RACE software, a professional audio tool designed to generate presets for loudspeaker systems. RACE not only displays filter, level and delay settings, but also calculates the true acoustic response of the component, making any change in parameters visible and audible in real time.





3 way system (stereo)
PX2122 (6)
PX2181 (6)
Dx38 (2)
CP4000S (6)



3 way system (stereo)
PX2122 (4)
PX2181 (6)
Dx38 (2)
CP4000S (5)



3 way system (stereo)
PX2122 (4)
PX2181 (4)
Dx38 (2)
CP4000S (5)

2 way system (stereo)
PX2152 (4)
PX2181 (4)
Dx38 (1)
CP4000S (2)



3 way system (stereo)
PX2152 (2)
PX2181 (4)
Dx38 (2)
CP4000S (5)

2 way system (stereo)
PX2152 (2)
PX2181 (4)
Dx38 (1)
CP4000S (2)



3 way system (stereo)
PX2152 (2)
PX2181 (2)
Dx38 (2)
CP4000S (3)

2 way system (stereo)
PX2152 (2)
PX2181 (2)
Dx38 (1)
CP4000S (2)

Technical Specifications	PX2122	PX2152	PX2181	PX1122M	PX1152M
Freq. Response ¹ (-3 dB)	80 Hz - 15 kHz	60 Hz - 15 kHz	45 Hz - 160 Hz	70 Hz - 15 kHz	70 Hz - 15 kHz
Freq. Range ¹ (-10 dB)	60 Hz - 19 kHz	50 Hz - 19 kHz	40 Hz - 180 Hz	55 Hz - 19 kHz	50 Hz - 19 kHz
Rec. Hi-pass Frequency	80 Hz	40 Hz	32 Hz	50 Hz	45 Hz
Rec. Lo-pass Frequency	n/a	n/a	80 Hz - 125 Hz	n/a	n/a
Axial Sensitivity ¹	102 dB (1W/1m)	99 dB (1W/1m)	105 dB (1W/1m)	98 dB (1W/1m)	100 dB (1W/1m)
Max Calculated SPL ¹	138 dB	136 dB	141 dB	132 dB	134 dB
Horizontal Coverage	45° or 30°	60° or 45°	Omnidirectional	90°	90°
Vertical Coverage	30° or 45°	45° or 60°	Omnidirectional	45°	45°
Power Handling (System)	Bi-amp only	1200W Continuous, 4800W Peak	1000W Continuous, 4000W Peak	600W Continuous, 2400W Peak	600W Continuous, 2400W Peak
LF Power Handling (Bi-amp):	1000W Continuous, 4000W Peak	1000W Continuous, 4000W Peak	500W Continuous, 2000W Peak	500W Continuous, 2000W Peak	500W Continuous, 2000W Peak
HF Power Handling (Bi-Amp)	80W Continuous, 320W Peak	80W Continuous, 320W Peak	n/a	80W Continuous, 320W Peak	80W Continuous, 320W Peak
LF Transducer:	(2) DVX3121, 12 in. (305 mm) Driver	(2) DVX3150, 15 in. (381mm) Driver	(2) DVX3180, 18 in. (457mm) Drivers	(1) DVX3121, 12 in. (305mm) Driver	(1) DVX3151, 15 in. (381mm) Driver
HF Transducers	(2) ND2-16, 2 in. (50mm) Diaphragm Compression Drivers	(2) ND2-16, 2 in. (50mm) Diaphragm Compression Drivers	n/a	(2) ND2-16, 2 in. (50mm) Diaphragm Compression Drivers	(2) ND2-16, 2 in. (50mm) Diaphragm Compression Drivers
Crossover Frequency	1600 Hz	1900 Hz	n/a	1400 Hz	1400 Hz
LF Impedance	4 Ohms Nominal	4 Ohms Nominal	4 Ohms Parallel, 8 Ohms Dual	8 Ohms Nominal	8 Ohms Nominal
HF Impedance	8 Ohms Nominal	8 Ohms Nominal	n/a	8 Ohms Nominal	8 Ohms Nominal
Connectors	(2) Neutrik Speakon NL4	(2) Neutrik Speakon NL4	(2) Neutrik Speakon NL4	(3) Neutrik Speakon NL4	(3) Neutrik Speakon NL4
Enclosure Material	18mm Plywood, Black EVCoat™	18mm Plywood, Black EVCoat™	18mm Plywood, Black EVCoat™	18mm Plywood, Black EVCoat™	18mm Plywood, Black EVCoat™
Suspension	(8) M10 Points - (6) on Top and (2) on Bottom of Enclosure	(8) M10 Points - (6) on Top and (2) on Bottom of Enclosure	n/a	Rigging Point for VSA-1 Strong Arm Accessory	Rigging Point for VSA-1 Strong Arm Accessory
Grille	Polyester Powder Coated, 16GA Galvanized Steel, Rotatable Logo	Polyester Powder Coated, 16GA Galvanized Steel, Rotatable Logo	Polyester Powder Coated, 16GA Galvanized Steel, Rotatable Logo	Polyester Powder Coated, 16GA Galvanized Steel, Rotatable Logo	Polyester Powder Coated, 16GA Galvanized Steel, Rotatable Logo
Dim (H x W x D)	1219mm x 457mm x 445mm (48.00" x 18.00" x 17.50")	1219mm x 457mm x 445mm (48.00" x 18.00" x 17.50")	1219mm x 569mm x 758mm (48.00" x 22.42" x 29.85)	546mm x 366mm x 305mm (21.50" x 14.42" x 12.04")	610mm x 442mm x 329mm (24.00" x 17.42" x 12.97")
Net Weight	50.1 kg (110.3 lbs)	50.76 kg (111.9 lbs)	86.5 kg (190.5 lbs)	23.04 kg (50.8 lbs)	25.1 kg (55.3 lbs)
Shipping Weight	58.9 kg (129.6 lbs)	60.51 kg (133.4 lbs)	94.8 kg (208.7 lbs)	26.14 kg (57.6 lbs)	28.2 kg (62.1 lbs)
¹ Half Space measurement					

Available Accessories:

PX-D1 - wheel kit for PX2122 and PX2152
 PX-D2 - wheel kit for PX2181
 PX-G1 - fly grid for PX2122 and PX2152
 VSA-1 - strong arm mount for PX1122M and PX1152M
 TCA-1 - truss clamp for VSA-1

EBK-M10 - set of three M10 eyebolts
 PXC-12M - durable Cordura cover for PX1122M
 PXC-15M - durable Cordura cover for PX1152M
 PXC-Top - durable Cordura cover for PX2122 and PX2152
 PXC-Sub - durable Cordura cover for PX2181

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